

Application No.: 10/579,089
Filing Date: March 9, 2007

REMARKS

After entry of the present amendments Claims 1-9, 11-15, 18, 19, 22, 24, and 31-34, 36-49, 51-63, and 64-79 will be pending. Claims 1-4 are amended herein to recite that the protein concentrate is selected from a renneted milk protein concentrate, a renneted milk, and a reconstituted renneted milk protein concentrate. Claims 2 and 4 are amended to remove the phrase "if required". Claims 76-79 are adjusted in view of the amendments to Claims 1-4. Claims 10, 35, 50, and 64 are canceled herein. Support for the amendments can be found throughout the specification and claims as originally filed, in particular Claims 10, 35, 50, and 64. No new matter is added.

Applicants submit that this application is in condition for allowance and such action is earnestly requested. Each of the Examiner's reasons for rejection is addressed below.

Rejections under 35 U.S.C. § 112

Claims 2 and 4 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner specifically objected to the use of the phrase "if required" in Claims 1-4. Without acquiescing in the rejection, Claims 2 and 4 are amended to remove the phrase "if required". Withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. § 103(a)

It is well settled that the Examiner "bears the initial burden of presenting a *prima facie* case of unpatentability..." *In re Sullivan*, 498 F.3d 1345 (Fed. Cir. 2007). Until the Examiner has established a *prima facie* case of obviousness, the Applicant need not present arguments or evidence of non-obviousness. To establish a *prima facie* case of obviousness, the Examiner must establish at least three elements. First, the prior art reference (or references when combined) must teach or suggest all of the claim limitations: "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 165 U.S.P.Q. 494, 496 (CCPA 1970); ("the need to demonstrate the presence of all claim limitations in the prior art was not obviated [by KSR]", *Abbott Labs. v. Sandoz, Inc.*, 2007 WL 1549498, *4

(N.D. Ill. May 24, 2007)); *see also* M.P.E.P. § 2143.03. Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986); *Pharmastem Therapeutics v. Viacell, Inc.*, 491 F.3d 1342, 83 U.S.P.Q.2d 1289 (Fed. Cir. 2007); *see also* M.P.E.P. § 2143.02. And finally, the Examiner must articulate some reason to modify or combine the cited references that renders the claim obvious. Merely establishing that the claimed elements can be found in the prior art is not sufficient to establish a *prima facie* case of obviousness. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (emphasis added).

Instead, the Court has made clear that the Examiner must establish a reason one of skill in the art would have combined the elements of the prior art, and that such reason must be more than a conclusory statement that it would have been obvious. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1740-1741 (2007).

Applicants respectfully submit that the pending claims as amended are not obvious under 35 U.S.C. § 103(a) for the reasons detailed below.

The Combination of Blazey/Lashkari Does Not Make Claims 1, 4, 5, 9, 10-13, 15, 18, 19, 22, 63-67, 69-72, 76, and 79 Obvious

Claims 1, 4, 5, 9, 10-13, 15, 18, 19, 22, 63-67, 69-72, 76, and 79 stand rejected under 35 U.S.C. § 103(a) as unpatentable in view of U.S. Patent No. 6,177,118 to Blazey et al. (hereinafter Blazey) in view of GB 1,057 170 to Lashkari and WO 02/082917 to Dybing as evidenced by U.S. Patent No. 4,655,127 to Skovhauge et al and U.S. Patent No. 5,455,051 to Groesbeck et al.

Independent Claims 1-4 are amended herein to recite “wherein the protein concentrate is selected from a renneted milk protein concentrate, a renneted milk, and a reconstituted renneted milk protein concentrate”. The combination of Blazey, Lashkari, and Dybing proposed by the Examiner fails to disclose this feature.

The retentate of Blazey does not read on a renneted milk protein concentrate, a renneted milk, and a reconstituted renneted milk protein concentrate as recited in Claims 1-4. Blazey discloses the use of a retentate supplemented with a protein concentrate or isolate in a rapid cheese making process. Part of the advantage of Blazey’s process is that rennet or other coagulating enzymes are not needed. Blazey discloses that “the main benefits of this technology over current art can be summarized as follows: 1) bacterial fermentation is not required 2) A milk

coagulating enzyme, *such as rennet, is not required* or can be used as an optional ingredient for treating a minor portion of the milk protein". Col. 6, line 64 to col. 7, line 2 (emphasis added). Thus, Blazey not only fails to disclose the use of a renneted milk protein concentrate, a renneted milk or a reconstituted renneted milk protein concentrate, but actually teaches away from the use of rennet at all.

In addition, renneting of the milk protein starting material will also affect the functionality of the end cheese product. Renneting the milk converts kappa casein to para-kappa casein. This change alters the hydrophobicity of the protein which plays an important role in the emulsification and binding of fat into the body of the end cheese product. Thus, modifying Blazey to use rennet would not only change the principle of operation, but also would change the product. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). Thus, there is no reason to make the combination proposed by the Examiner.

Dybing also fails to make up for the deficiencies of Blazey. Dybing discloses a method for producing a modified MPC that is used for producing a gel. Page 3, lines 25-26. Dybing discloses modifying the MPC using cation exchange to replace monovalent cations for divalent cations. Page 3, lines 28-31. Dybing and Blazey both fail to disclose any examples using renneted MPC. Thus, Dybing fails to provide any reason to modify Blazey to use rennet.

Applicants also submit that the combination of Blazey, Dybing, and Lashkari is improper. In view of the amendments to independent Claims 1-4, it is now more clear that Blazey firmly teaches away from the claimed methods. Blazey teaches away from using a coagulant. Specifically, Blazey discloses that "Other preferred ingredients include organic and inorganic acids, especially citric acid or lactic acid, for adjusting the pH of the composition *without* precipitating, aggregating, *coagulating*, or gelling the proteins". Col. 6, lines 58-61 (emphasis added). Blazey further discloses a benefit over the prior art that "a milk coagulating enzyme, such as rennet, is not required or can be used as an optional ingredient for treating a minor portion of the milk protein". Col. 6, line 67-col. 7, line 2. It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983). Accordingly, Applicants respectfully request withdrawal of the

rejection because Blazey teaches away from the combination of Blazey, Dybing, and Lashkari proposed by the Examiner.

Lashkari fails to make up for the deficiencies of Blazey and Dybing because Lashkari fails to disclose the use of rennet. The Examiner further found that it would have been obvious to modify the cheese produce of Blazey to incorporate the cheesy flavor of Lashkari to make a fast bleu cheese with the reduced calcium starting material described in Dybing to enhance gel formation. One of the goals of Blazey is to make a fast cheese, for example Blazey discloses that “the process is rapid and takes less than about 30 minutes from making the first blend with concentrated milk retentate to the point of packaging of the molten cheese”. Col. 7, lines 3-5. Lashkari discloses the use of a sub-culture medium, including use of *Penicillium roqueforti*, and that “[i]t is usually necessary to incubate this medium for a period of time exceeding 7 days, a particularly suitable time being about 48 hours.” Page 1, line 80 to page 2, line 2. Thus, there is no reason to use the starter culture of Lashkari in the fast cheese process of Blazey. Adding the bacterium as taught in Lashkari would require aging on the order of days, which would frustrate the purpose of the rapid cheese process of Blazey. In addition, using the culture of Lashkari would be expected to produce a product with a different functionality from the product disclosed in Blazey. Thus, the combination of Blazey and Lashkari is improper.

Further, the differences in the starting materials used in Blazey and the claimed methods will result in vastly different cheese products. The retentate used in Blazey is specifically prepared to ensure that whey proteins are retained. The use of whey proteins in cheese making is known to persons of skill in the art to alter the functionality of the end cheese product, in particular to alter the texture including hardness, chewiness, moisture content, and protein content. A person of skill in the art would understand that a cheese made with MPC only; compared to MPC and retentate comprising whey protein will have very different textures and therefore functionality.

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Accordingly, Applicants respectfully submit that the combination of Blazey, Dybing, and Lashkari fail to disclose the features of Claims 1-4 as amended herein and respectfully request withdrawal of the rejection of Claims 1-4 and their dependent claims.

Additionally, Applicants submit that Claims 5-15, 18, 19, 22, 24, and 31-74 are also not made obvious by the combination of Blazey, Lashkari, and Dybing, not only because they depend from Claim 1-4, but also on their own merit.

The Combination of Blazey/Lashkari/Dybing/Bernard Does Not Make Claims 2, 3, 8, 11, 31, 34-38, 40-43, 45, 49, 50-53, 55-58, 62, and 77 Obvious

Claims 2, 3, 8, 11, 31, 34-38, 40-43, 45, 49, 50-53, 55-58, 62, and 77 stand rejected under 35 U.S.C. § 103(a) as unpatentable in view of Blazey, Lashkari, Dybing, and U.S. Patent No. 4,948,613 to Bernard et al. (hereinafter "Bernard") as evidenced by Skovhauge and Groesbeck.

As discussed above, the combination of Blazey, Lashkari, and Dybing fails to disclose the features of independent Claims 1-4 as amended herein. Bernard fails to make up for the deficiencies noted above. The Examiner found Bernard to disclose a cheese product that is cooled, where the surface of the cheese is inoculated with micro-organisms that grow and promote ripening of the cheese. Office Action at page 5.

Bernard discloses the use of an emulsifying agent and beating melted cheese while still hot and using an inert gas such as nitrogen to decrease the density of the mixture. See col. 3, lines 6-41. Thus, Bernard fails to disclose, explicitly or inherently, "wherein the protein concentrate is selected from a renneted milk protein concentrate, a renneted milk, and a reconstituted renneted milk protein concentrate" as claimed in Claims 1-4 as amended herein.

The Combination of Blazey/Lashkari and Other References Do Not Make Claims 6, 7, 14, 24, 32, 33, 39, 44, 46-48, 54, 59-61, 68, 73, and 75 Obvious

Claims 6, 7, 14, 24, 32, 33, 39, 44, 46-48, 54, 59-61, 68, 73, and 75 stand rejected under 35 U.S.C. § 103 as unpatentable over Blazey, Lashkari, and Dybing further in view of one or more of U.S. Patent No. 4,948,613 to Bernard et al. (hereinafter Bernard), U.S. Patent No. 3,091,539 to Chikuma (hereinafter Chikuma), U.S. Patent No. 2,965,492 to Bauman (hereinafter

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Bauman), and the American Cheese Society Webpage as evidenced by Skovhauge and Groesbeck.

The Examiner again found Bernard to disclose a cheese product that is cooled, where the surface of the cheese is inoculated with micro-organisms that grow and promote the ripening of cheese. The Examiner found Chikuma to disclose a method of making a cheese product by freezing, thawing and further ripening curd. The Examiner found Bauman to disclose preparing a dried cheese product where the condensed milk is inoculated with lactic acid starter and *Penicillium roqueforti*. The Examiner found the American Cheese Society Webpage to disclose that cheese should be stored between 35°F and 45°F at a high humidity level.

As discussed above, Applicants submit that the combination of Blazey, Lashkari, and Dybing fails to disclose, explicitly or inherently, use of a protein concentrate selected from a renneted milk protein concentrate, a renneted milk, and a reconstituted renneted milk protein concentrate” as claimed in Claims 1-4 as amended herein. Bernard, Chikuma, Bauman, and the American Cheese Society Webpage fail to make up for the deficiencies of Blazey and Lashkari noted above. Further, Blazey teaches away from the combination with Lashkari and Dybing proposed by the Examiner; thus the combination is improper.

Accordingly, Applicants respectfully request withdrawal of the rejection of Claims 6, 7, 14, 24, 32, 33, 39, 44, 46-48, 54, 59-61, 68, 73, and 75.

No Disclaimers or Disavowals

Although the present communication includes alterations to the application or claims, or characterizations of claim scope or referenced art, Applicants are not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicants reserve the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicants have made any disclaimers or disavowals of any subject matter supported by the present application.

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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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